REMARKS

This responds to the Final Office Action mailed on August 26, 2008.

No claims are currently amended, no claims are currently canceled, and no claims are currently added; as a result, claims 1-12, 14-25, 27, and 29-38 are now pending and subject to examination in this application.

§103 Rejection of the Claims

Claims 1, 2, 7-12, 14-17, 20-25, 27, 29 and 33-38 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Wood et al. (U.S. 6,675,149) and incorporated by reference U.S. Patent 5,420,419 (Wood) in view of Duvall, III (U.S. 5,258,619).

Claims 3-5 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Wood et al. and incorporated by reference U.S. Patent 5,420,419 in view of Duvall, III as applied to claim 2 above, and further in view of Applicant Admitted Prior Art.

Claim 6 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Wood et al. and incorporated by reference U.S. Patent 5,420,419 in view of Duvall, III as applied in view of Applicant Admitted Prior Art as applied to claim 5 above, and further in view of Thiede et al. (U.S. 5,129,595).

Claims 18, 19 and 30-32 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Wood et al. and incorporated by reference U.S. Patent 5,420,419 in view of Duvall, III as applied to claims 17 and 29 above, and further in view of Thiede et al. (U.S. 5,129,595).

The Applicant respectfully traverses these rejections. In short, the Final Office Action is apparently equating the slider mechanism of the '149 patent with applying N bias pulses substantially sequentially during a time frame. However, the Applicant respectfully submits that the slider mechanism of the '149 patent has nothing to do with bias pulses at all, and respectfully submits that for at least this reason the rejection of the claims should be withdrawn.

Claim 1 recites a method for improving the performance, sensitivity, and facility of operation of an array of microbolometers including applying N bias pulses substantially sequentially during a frame time to each microbolometer in the array, wherein N is 2 or greater, and wherein the N bias pulses have a shorter time duration and frequency, selected such that a

resulting temperature in each of the microbolometers in the array due to such applying of N bias pulses is substantially uniform during the frame time, wherein the time duration of each bias pulse is 1/N times that of a single pulse suitable for reading the array. Claim 1 further recites measuring N resulting signals corresponding to the N bias pulses, and computing an average signal value from the N resulting signals corresponding to each microbolometer in the array during the frame time. The Final Office Action contends that these features are disclosed in the '149 patent at column 5, lines 47-53. The Applicant respectfully disagrees.

The '149 patent, at lines 39-53 of column 5, states:

> During the interval in which the camera is held steady, the digital processor 36 commands the slider mechanism 46 to slide the moveable board 41 across the focal plane of the lens 42 at a controlled rate whilst sensor signals are digitized by the digital processor 36 and stored in memory 38. For each lateral slide movement of the array 10 by a distance equal to a pixel width, the electrical signal from each pixel 11 in the array 10 is measured and stored. If desired, slower slide velocities, or multiple scans of any desired region of the scene, can be employed to allow sensitivity improvement by multiple measurement and averaging of sensor signals: in this case, a stable platform for example, a tripod mounting of the camera may be required, analogous to long exposures of visible photographic still frame cameras.

With all due respect, the Applicant respectfully submits that the above-cited portion of the '149 patent does not disclose applying N bias pulses substantially sequentially during a time frame, or measuring the signals or computing an average signal value resulting from those N bias pulses. While the Final Office Action has not expounded upon its contention, if the Final Office Action is citing the above portion of the '149 patent for the disclosure of a sliding mechanism, the Applicant respectfully submits that a lateral slide movement of a slider mechanism over a pixel does not disclose N bias signals during a time frame. Similarly, multiple scans of a desired region of a frame by the slider mechanism does not disclose N bias pulses substantially sequentially during a time frame.

The Final Office Action concedes that the '149 patent does not disclose that the N bias pulses have a shorter time duration and frequency, or are selected such that a resulting temperature in each of the microbolometers in the array due to such applying of N bias pulses is substantially uniform during the frame time, wherein the time duration of each bias pulse is

1/N times that of a single pulse suitable for reading the array. However, the Final Office Action contends that this feature is disclosed in the '619 patent to Duvall at column 6, lines 43-53. The Applicant respectfully disagrees.

This section of the '619 patent relates only to using different wave shapes in a swept bias (as compared to using a constant bias, *see* column 4, lines 14-16 of the '619 patent). Just as in the '149 patent, there is simply no disclosure of applying N bias pulses substantially sequentially during a time frame, and there is surely not a disclosure of N bias pulses have a shorter time duration and frequency, or that are selected such that a resulting temperature in each of the microbolometers in the array due to such applying of N bias pulses is substantially uniform during the frame time, wherein the time duration of each bias pulse is 1/N times that of a single pulse suitable for reading the array.

Since the references of record lack these features of claim 1, the Applicant respectfully submits that the Final Office Action has failed to establish a *prima facie* case of obviousness, and respectfully requests the withdrawal of the rejection of claim 1 and the claims dependent on claim 1.

Further, since independent claim 14, and the claims dependent thereon, include substantially the same features, the Applicant respectfully submits that a *prima facie* case of obviousness has not been established for those claims either, and respectfully requests the withdrawal of the rejection of those claims.

Independent claim 27 recites in part a signal processing circuit for an array including microbolometers that includes a timing circuit for applying N bias pulses substantially sequentially to each microbolometer in the array during a frame time such that a resulting temperature in each of the microbolometers in the array due to such applying of N bias pulses varies less than one degree Celsius during the frame time. In its rejection of claim 12, which recites the feature of varying less than one degree Celsius, the Final Office Action admits that the '149 patent does not disclose a temperature variation of less than one degree Celsius. However, the Final Office Action contends that this feature is disclosed in the Duvall reference at column 6, lines 43-53. The Applicant respectfully disagrees. The cited portion of Duvall mentions nothing about a temperature variation of less than one degree Celsius. The Applicant

respectfully submits that the Final Office Action has failed to established a *prima facie* case of obviousness for claim 27, and respectfully requests the withdrawal of the rejection of claim 27.

CONCLUSION

Applicant respectfully submits that the claims are in condition for allowance, and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's representative at (612) 373-6900 to facilitate prosecution of this application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

Respectfully submitted,

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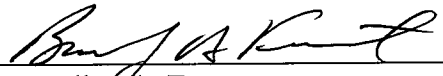
Date: October 27, 2008

By 
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CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence is being filed using the USPTO's electronic filing system EFS-Web, and is addressed to: Mail Stop AF, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on October 27, 2008.

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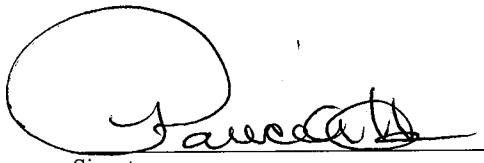

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